

3.16 Potential Contaminated Sites

The Study Team performed two contaminated site surveys of the areas surrounding the existing Blue Water Bridge Plaza and the potential relocated plaza site for the Township Alternative. The purpose of these surveys was to locate and identify potential contaminated sites within or near to the potential areas of construction. Such sites would contain Recognized Environmental Conditions (RECs). This section summarizes the results of these contaminated sites surveys. **Figure E.23**, in the separate **Appendix E** volume, shows the approximate locations of potential contaminated sites in the Study Area.

3.16.1 What Methods were used to Determine if Contaminated Sites Exist in the Study Area?

The contaminated sites search included a review of regulatory databases on known contaminated sites, a review of the history of land uses in the area, a walkover, and discussions with the companies that provide power, water, and sewer services.

The Study Team used the American Society for Testing and Materials (ASTM) Standard Practice for Environmental Site Assessments: Phase I Environmental Site Assessment Process (Standard E1527-00) in developing the geographical areas for the database reviews and walkovers. Contaminated sites specialists completed site walkovers on October 2, 2003 for the area surrounding the existing plaza, and on March 11, 2004 for the area surrounding the relocated plaza for the Township Alternative. The purpose of the site visits was to locate the sites identified through the database review and to locate any additional suspect sites not identified through the database review.

Review of Regulatory Lists and Databases: The Study Team reviewed the following state and federal regulatory agency lists and databases to identify potential regulated and/or environmentally impacted sites in the vicinity of the Study Area:

Recognized Environmental Conditions (RECs)

The presence of or likely presence of hazardous substances or petroleum products on a property under conditions that indicate an existing release, a past release, or a material threat of a release of any hazardous substances or petroleum products.

- MDEQ – Remediation and Redevelopment Division (RRD), Michigan Act 451 Part 201 Sites of Environmental Contamination; 1-mile radius. (Part 201 Contaminated Sites)
- MDEQ – RRD, Open and Closed Leaking Underground Storage Tank (LUST) Sites; 1/2-mile radius. (Open LUST/Closed LUST)
- MDEQ – Waste and Hazardous Materials Division (WHMD), Registered Underground Storage Tanks (UST)
- MDEQ – WHMD, Operating Solid Waste Landfills in Michigan listing, Solid Waste Disposal Areas in Michigan listing, and the Inactive Landfill listing; 1/2-mile radius
- United States Environmental Protection Agency (USEPA) Superfund Comprehensive Environmental Response, Compensation and Liability Information System (CERCLIS) Hazardous Waste Sites; 1/2-mile radius
- USEPA Superfund CERCLIS Archive No Further Remedial Action Planned (NFRAP) sites
- USEPA Superfund NPL listing; 1-mile radius
- USEPA Federal Resource Conservation and Recovery Act of 1976 (RCRA) Large Quantity Generators (LQG) and Small Quantity Generators (SQG) List for Michigan
- USEPA RCRA Treatment Storage and Disposal (TSD) Facilities List; 1/2-mile radius
- Federal Resource Conservation and Recovery Information System (RCRIS) Corrective Action (CORRACTS) Facilities List; 1-mile radius
- USEPA Emergency Response Notification System (ERNS) List
- MDEQ Baseline Environmental Assessment (BEA) List

Contaminated sites specialists went to the sites identified in the regulatory database search where possible. Further details are discussed below.

Review of Historical Land Uses: The Study Team also conducted a historical review of the former uses of properties in the Study Area to determine any potential contaminated sites. This historical review included four different types of information:

- Topographic maps produced by the U.S. Geological Survey which show roadways and name some specific prominent land uses (schools, industry, parks, etc.)
- Historic aerial photographs of the Study Area and surrounding areas, dating from the 1940s until the present day
- Sanborn fire insurance maps of the project area for those parts of the Study Area covered by these maps near the existing plaza site
- Local street directories dating as far back as 1906 for the On-site Study Area surrounding the existing plaza and to the year 1936 for the Off-site Study Area in Port Huron Township

For the On-site Study Area surrounding the existing plaza, the reviews identified 18 potential sites that could be labeled as RECs. This included four gas stations, four former gas stations, three auto service/maintenance garages, an auto wash, an oil change facility, a dry cleaner/former gas station, a former truck stop, a substation transit yard, a railroad spur/coal yard, and a combination of former auto parts manufacturing facility/sheet metal contracting/railroad spur/exterior storage.



Many gas station sites are RECs

For the Off-site Study Area, the reviews identified two potential sites representing RECs in connection with the Study Area. One site was a property that had housed a former gas station, a roofing/siding company and a restaurant. The other site had a former gas station and subsequently has been redeveloped as a small office plaza.

Walkover/Interviews: The historical review identified many of the same sites identified through the review of state and federal agency lists. After concluding the database and historic documentation reviews, the Study Team then conducted walkovers of the Study Area to identify additional RECs and verify potential contaminated sites where possible. The walkover for the On-site Study Area was performed on October 22, 2002 and the walkover for the Off-site Study Area was performed on March 11, 2004. The walkovers considered

chemical use and storage, evidence of underground and above ground storage tanks, equipment containing polychlorinated biphenyls (PCBs), and sites that generate, treat, store, or dispose of waste.

Walkovers only evaluated the outside of buildings where documented. Blue Water Bridge staff were interviewed for additional information about the usage of hazardous materials on the existing bridge plaza site.

On-site Study Area Walkover: The walkover verified the presence of 18 potential sites representing RECs in the On-site Study Area.



Above Ground Storage Tank

Underground storage tank systems (USTs) were observed in the Study Area and represent RECs. There were former aboveground storage tanks (ASTs), but they are not considered RECs in connection with the Study Area because there was no staining on the concrete at the former tank locations.



Underground Storage Tank

The walkover also identified potential RECs associated with the Detroit Edison Substation adjacent to the existing plaza. No evidence of leakage from the transformers at other locations was found, nor were stains observed on the ground beneath or around them. Based on the age of the Substation Transit yard (present since at least 1948), PCBs were potentially used with the transformers.

There was no visual evidence of the generation, treatment, storage, or disposal of liquid or solid wastes observed in the On-site Study Area other than household and commercial restaurant waste. Based on the age of the buildings located within the Study Area, asbestos-containing materials and/or lead-containing paint may be present. There is a well for monitoring methane gas within the Study Area, but it is not considered a REC. Gas samples will be taken from all boring drill holes to evaluate the presence of methane or other gases.

Methane gas in Port Huron comes from the bedrock found within the area. It is sometimes expelled from median to stiff clays with water under significant pressure but more frequently it is just vented. As supports for major structures

are driven by piles or drilled, shaft methane is a concern as the foundation structure may create a channel for methane gas to flow to the surface of foundation levels including basements. Support of single story structures such as toll or bridge inspection booths will be on shallow footing. Therefore, it is not expected that methane gas will be encountered during or after construction. Although there is a remote chance that sand seams could carry the gas to the surface/foundation level.

Off-site Study Area Walkover: The walkover verified the presence of two potential sites representing RECs in connection with the Off-site Study Area.

One of the two sites had a documented LUST, and had experienced some past remediation efforts through tank removal, though contaminated soil was never removed from the site.

What is a LUST?

Leaking Underground
Storage Tank

A number of electrical utility transformers (both pad and pole-mounted) were observed, but with no evidence of leakage. There was no visual evidence of the generation, treatment, storage, or disposal of liquid or solid wastes observed on the Study Area other than household and commercial/restaurant wastes. Based on the age of the buildings located within the Study Area, asbestos-containing materials and/or lead-containing paint may be present.

3.16.2 Will the Alternatives Affect any Contaminated Sites?

No-Build Alternative: There would be no impacts to potentially contaminated sites as a result of the No-Build Alternative.

All three Build Alternatives would require the acquisition of potentially contaminated sites beyond the limits of the existing Blue Water Bridge facilities, and these properties have been described above and in the tables that follow. In addition, there are documented contamination sites located within the existing Blue Water Bridge plaza area that could be impacted by the City East and the City West Alternatives.

City East and West Alternatives: A total of 20 RECs were identified during the assessment of existing conditions. Eighteen of these sites could be affected by construction as

part of the reconstruction of the existing plaza under the City East or City West Alternatives. Two sites would be impacted by reconstruction of the Water Street interchange. **Table 3.16.1** gives an inventory of the 20 RECs located within the limits of the area potentially impacted by the City Alternatives.

Township Alternative: The Township Alternative would potentially affect ten RECs that were identified during the assessment of existing conditions. Every one of these ten sites would potentially be affected by construction of the City Alternatives. None of these properties are on or near the site of the new plaza. The ten properties would be affected by improvements to local roadways under the Township Alternative, including the reconstruction of the Water Street interchange, Pine Grove Avenue, Hancock Street and the M-25 Connector. **Table 3.16.2** gives an inventory of the ten RECs located within the limits of the Township Alternative. The site numbering is consistent with the sites listed in **Table 3.16.1**.

Mitigation: Further consideration of contaminated sites and hazardous materials in the Study Area will be necessary to ensure the safety of workers during construction, prevent any future migration of existing subsurface contaminants, and address potential liability associated with purchase of those parcels. Under any of the Alternatives, a Phase II subsurface assessment will be needed to further investigate the contamination at the REC sites (20 under the City East and Preferred Alternative and ten under the Township Alternative). Depending upon the findings of the Phase II assessment, it may be necessary to perform further investigation or remediation.

Any structures acquired for the project should be tested for asbestos-containing materials and lead-containing materials before demolition.

Table 3.16.1 Potential RECs Affected by the City East and City West Alternatives

REC #	General Portion of Study Area	Use at Time of Study	Notes on Other Previous Uses
1	Hancock St. Area	car wash	previously residential
2	Hancock St. Area	gas station	residential, parking lot
3	Hancock St. Area	gas station	gas station since 1926±
4	Pine Grove Ave. North of Existing Plaza	auto sales and repair	residential
5	Pine Grove Ave. North of Existing Plaza	gas station	auto dealer, residential
6	Pine Grove Ave. North of Existing Plaza	vacant	grocery, gas station
7	Existing Plaza	n/a, under current BWB plaza since 1990s reconstruction	former BWB maintenance facility; hydraulic hoists and salt storage
8	Existing Plaza	n/a, under current BWB plaza since 1990s reconstruction	former gas station
9	Pine Grove Ave. South of Existing Plaza	parking lot	part of dairy facilities, gas station
10	Pine Grove Ave. South of Existing Plaza	auto sales and repair	auto use since 1930s
11	Existing Plaza	n/a, under current BWB plaza since 1990s reconstruction	coal storage/distribution, railroad spur
12	Harker Street	vacant	truck fueling facility
13	Existing Plaza	electrical utility substation	
14	Existing Plaza	BWB ramp right of way	gas station
15	Existing Plaza	duty free store, ramp right of way	general contractor, florist, auto parts metal contractor, commercial sales, railroad spur, exterior storage mounds
16	Hancock St. Area	gas station	auto dealer, fruit market, agricultural
17	Hancock St. Area	oil change facility	residential
18	Pine Grove Ave. South of Existing Plaza	On-site dry cleaning	gas station
19	Water Street	commercial	gas station, roofing contractor, restaurant
20	Water Street	commercial strip plaza	gas station

Table 3.16.2 Potential RECs Affected by Township Alternative

Site #	General Portion of Study Area	Use at Time of Study	Notes on Other Previous Uses
1	Hancock St. Area	car wash	previously residential
2	Hancock St. Area	gas station	residential, parking lot
3	Hancock St. Area	gas station	gas station since 1926±
4	Pine Grove Ave. North of Existing Plaza	auto sales and repair	residential
9	Pine Grove Ave. South of Existing Plaza	parking lot	part of dairy facilities, gas station
10	Pine Grove Ave. South of Existing Plaza	auto sales and repair	auto use since 1930s
16	Hancock St. Area	gas station	auto dealer, fruit market, agricultural
18	Pine Grove Ave. South of Existing Plaza	on-site dry cleaning	gas station
19	Water Street	commercial	gas station, roofing contractor, restaurant
20	Water Street	commercial strip plaza	gas station

3.17 Farmland

3.17.1 How Much Farmland Exists in the Study Area?

Although the existing plaza is located within the City of Port Huron, the Study Area includes a rural/suburban area of Port Huron Township that, at one time, was used for agricultural purposes. At this time, inactive agricultural land still exists in the Port Huron Township portion of the Study Area, however it has been rezoned for residential development.

According to the 2002 Census of Agriculture, St. Clair County has 242,034 acres of actively farmed land representing 52 percent of the land in the county. It includes crop land, feed lots, permanent pastures and related agriculture uses. Farming accounts for three percent of the county's total employment. The average size farm in St. Clair County is 145 acres, with half of the farms being smaller than 70 acres. The average estimated market value of farmland and associated buildings in St. Clair County is \$3,970 per acre.

Part 361, Farmland and Open Space Preservation, of the Natural Resources and Environmental Protection Act, Public Act 451 of 1991 formerly known as the Farmland and Open Space Preservation Program (PA116) of 1974 preserves farmland and open space through restrictive covenants and provides tax incentives for participation in the program. It enables a farm owner to enter into a Development Rights Agreement with the state, which ensures that the land remains in an agricultural use for a minimum of 10 years. In return for maintaining the land in an agricultural use, the landowner is entitled to certain income tax benefits, and the land is not subject to special assessments for sanitary sewer, water, lights or non-farm drain projects.

St. Clair County's Purchase of Development Rights Program is a voluntary program that compensates owners of agricultural property for their willingness to accept a permanent deed restriction on their land that limits future development of the land for non-agricultural purposes. Landowners are compensated for the fair market value of their land based on the difference between what it could be sold for on the open market with no restrictions for development purposes and



Farm in St. Clair County

what it can be sold for agricultural purposes. Currently, no development rights have been purchased in St. Clair County.

The City of Port Huron has no land currently being used for farmland purposes, while Port Huron Township has 256 acres of land designated to farming (SEMCOG, 2000). Although farmland exists within Port Huron Township Study Area, this land is not actively farmed and has been rezoned residential. There is no land zoned for farming/agriculture within the Study Area.

Neighboring communities of the Study Area also contain agricultural lands. In Fort Gratiot Township, agricultural lands include cultivated land, pasture, grazing lands, and fallow lands. There are 1,709 acres of farmland which constitute 16.8 percent of Fort Gratiot Township. The agricultural land can be considered fragmented or isolated with few farms larger than 80 acres.

In Kimball Township, 75 percent of the land is farmed, vacant, or contains natural features. Much of this agricultural land has been plowed but left unseeded or is used for pasture.

3.17.2 Is there Prime and Unique Farmland in the Study Area?



Farmstead in St. Clair County

The Federal Farmland Protection Policy Act (PL 97-98) of 1981, modified in 1987 protects “prime farmland”, “unique farmland” or “farmland that is of statewide or local importance”. In the Study Area there are no prime or unique farmlands or farmland that is of statewide or local importance per the Important Farmlands Map of St. Clair County. Additionally, none of the soils located in the Study Area are prime agricultural soils.

Coordination with the Michigan Department of Agriculture indicated that there are no properties in the Open Farmland and Open Space Preservation Act (PA116 of 1974) within the Study Area.

3.17.3 How will the Project Affect Farmland?

As is required by the Farmland Protection Policy Act, the Natural Resources Conservation Service has been coordinated with and the Form NRCS-CPA-106 has been completed (see **Appendix C**). Since this project received a total point value of less than 160 points, this site will receive no further consideration for farmland protection. This project will have no significant impact on farmland.

There presently are no active farmlands or land zoned for farmland or agriculture in the Study Area. If a Build Alternative is chosen there will be no impact on farmland or agriculture. None of the Practical Alternatives would have an impact on farmland, farm employment or farm production.

What is Form NRCS-CPA-106?

Form AD-1006, "Farmland Conversion Impact Rating" is the form used by federal agencies who wish to convert farmland to nonagricultural uses.

3.18 Wild and Scenic Rivers

In 1968 the United States Congress passed the National Wild and Scenic Rivers Act. This act states that certain selected rivers of the United States, which have outstandingly remarkable scenic, recreational, geologic, fish and wildlife, historic, cultural or other similar values, shall be preserved in free-flowing condition, and that they and their immediate environments shall be protected for the benefit and enjoyment of present and future generations. The idea behind the National Wild and Scenic Rivers Act is not to halt the use of a river; instead, the goal is to preserve the character of a river.

There are no federal Wild or Scenic River systems in the Study Area. Additionally, there are no state designated rivers within the Study Area.

3.19 Coastal Zone

3.19.1 What is a Coastal Zone?

The Coastal Zone Management Act, originally passed in 1972, enables coastal states, including Michigan, to develop a coastal management program to improve protection of sensitive shoreline resources, to identify coastal areas appropriate for development, to designate areas hazardous to development and to improve public access to the coastline.

Michigan was among the first states to have its coastal program approved in 1978. The program is administered by the Michigan Department of Environmental Quality's (MDEQ) Environmental Science and Services Division.

Michigan's coastal zone boundary generally extends a minimum of 1,000-feet inland from the Ordinary High Water Mark of the Great Lakes and connecting channels, or further to include coastal lakes, river mouths and bays, floodplains, coastal wetlands, designated sand dune areas, public parks, recreation and natural areas and urban areas.

What is the Ordinary High Water Mark?

The water elevation marking the highest water level which has been maintained for a long enough time to leave a mark on the shoreline.

3.19.2 Is the Study Area Located in a Coastal Zone?

The project is located within a designated Michigan Coastal Zone Management Area. Therefore, review and authorization from the Michigan Coastal Zone Management Program will be required. In order to comply with Michigan State Law, since federal funding will be used, a review of federal agency activities is required for consistency with Michigan's Coastal Zone Management Program.

3.19.3 Will the Project Affect the Coastal Zone?

Impacts to the coastal zone will be avoided during construction of the project. A preliminary review of the project by the MDEQ indicates it is consistent with the Michigan Coastal Management Program. The project involves expansion of the Blue Water Bridge Plaza in areas that have been previously disturbed. The Study Team has indicated that these areas are not in direct or indirect contact with regulated coastal resources.

Modifications to the Black River Bridge will involve lengthening the piers located in the Black River. Due to physical disturbances to the river channel during construction, permits will be required from the State of Michigan and various federal agencies. However, the Study Team has determined that no significant impacts to the coastal zone are anticipated with any of the project alternatives.

3.20 Coastal Barriers/Critical Dunes

3.20.1 What are Coastal Barriers?

Coastal barriers are defined as bay barriers, barrier islands, and other geological features made up of sediment that protect landward aquatic habitats from direct wind and waves. These barriers provide essential habitats for wildlife and marine life, natural storm buffer zones, and areas of scientific, recreational, historic, and archaeological significance.

The Coastal Barrier Resources Act protects undeveloped coastal barriers and related areas by prohibiting direct or indirect federal funding of various projects in these areas that might support development. Limited exceptions are allowed, such as funding for fish and wildlife research.

3.20.2 What are Critical Dunes?

The Michigan Legislature has found that the critical dune areas of Michigan “are a unique, irreplaceable, and fragile resource that provides significant recreational, economic, scientific, geological, scenic, botanical, educational, agricultural, and ecological benefits to the people of this state and to people from other states and countries who visit this resource.” (MDEQ Website, 2005)

3.20.3 Are there any Coastal Barriers or Critical Dunes in the Study Area?

The Study Area contains no federally designated coastal barriers or state designated critical dunes, as defined in Part 353, Sand Dune Protection and Management, of the Natural Resources and Environmental Protection Act, 1994 PA 451.

3.21 Construction Impacts

3.21.1 What are the Construction Impacts of the No-Build Alternative?

Over time, maintenance of the existing plaza and local roads would periodically impact travelers passing through the Study Area. These impacts would be temporary during the time periods in which the maintenance would occur. The No-Build Alternative would create construction noise and vibration during the maintenance of existing roadways and the plaza. The No-Build Alternative would not affect water, sanitary sewer, gas, telephone, or electrical transmission lines other than during temporary maintenance activities.

3.21.2 What are the Construction Impacts of the City East, City West (Preferred), and Township Alternative?

The City East, City West (Preferred), and Township Alternative would all have temporary and short-term impacts on plaza users and the local community during construction. MDOT and FHWA plan to construct the project in phases. This will reduce the construction related impacts that occur at any one time to smaller parts of the Study Area. Temporary changes to existing travel patterns due to road closures and detours would likely impact traffic on local roads in the vicinity of plaza improvements. While these impacts are considered unavoidable, reducing the temporary impacts to motorists, pedestrians, and residents would be a key part of the construction staging and plans for traffic flow and detours during construction. While specific detour routes are unknown at this stage of the study, no lengthy detour routes are anticipated for any of the alternatives. Potential detour routes would vary; however, no two adjacent parallel routes would be closed at the same time.

Traffic Flow Impacts: Temporary delays to existing traffic due to construction will occur on I-94/I-69 and other local roadways with all three of the Build Alternatives. MDOT and FHWA will stage construction so that there are no total closures of I-94/I-69. Local roadways may experience some temporary closures.



MDOT will develop plans to keep traffic moving during construction.



Detours on local roads could be required during construction.

Under the Build Alternatives, traffic interruptions would occur at locations where the new or reconstructed roadway connects with existing roadways and where bridge and interchange improvements are proposed. At bridge locations where Build Alternatives pass over existing roadways, temporary lane closures and construction equipment access drives may be required. For bridge replacements at Water Street and the Lapeer Connector, temporary road closures and detours may be required until the new bridges are open to traffic.

Detours will result in increased traffic congestion on local roadways, delays, longer trips, and access changes to some commercial and private properties. Temporary changes in access to businesses due to detours could potentially affect retail businesses if appropriate measures are not taken to maintain access to all affected properties.

Minimizing delays, congestion, and access restrictions would be a priority during construction. MDOT will coordinate with local communities and the St. Clair County Road Commission to determine the best detour routes and access for the community.

MDOT will maintain public awareness throughout the project by providing specific information such as duration and location of detours, lane closures, alternative routes, upcoming activities, and anticipated construction deadlines.

Security and Disruption of Plaza Operations During Construction:

The existing plaza performs an essential role in protecting the national security of the United States. All three Build Alternatives will have some construction-period effects on portions of the existing plaza. Under the Township Alternative, this disruption will be minimal because the new plaza will be constructed while the existing one continues to operate. Both the City East and Preferred Alternative reconstruct the existing plaza in its current location. Both of these alternatives will have to be constructed in stages so that security is not compromised. In addition, construction staging will also have to work around the existing activities on the site.

MDOT will coordinate actively with the Blue Water Bridge Authority and the U.S. Customs and Border Protection to ensure that construction is as minimally disruptive as possible.

Construction Impacts to Businesses and Neighborhoods: All three Build Alternatives would temporarily disrupt access to some local businesses and neighborhoods in the vicinity of the existing plaza and at the Water Street interchange.

Contractors will be required to maintain access to businesses at all times to the extent possible. Contractors will coordinate with business owners continuously throughout the project. In neighborhoods impacted by construction, MDOT and the contractor will coordinate with residents regularly.

Construction Impacts to Emergency Services: The three Build Alternatives would likely impact emergency vehicle routes due to road closures, detours, and temporary traffic congestion/delays. The Township Alternative would likely be the least disruptive of the three Build Alternatives because it does not require the reconstruction of the M-25 Connector, Pine Grove Avenue, and 10th Avenue, all three major north-south roadways in the most densely populated part of the Study Area.

MDOT will coordinate with emergency service providers prior to the beginning of construction and at the beginning of new phases of construction. Communication will be maintained throughout construction. Adjustments to emergency response plans will be developed based on project activity.

Construction Impacts to Surface Streets: The City East and Preferred Alternative would be more disruptive to Pine Grove Avenue and 10th Avenue during construction than the Township Alternative. The City East Alternative involves the rerouting of Pine Grove Avenue to 10th Avenue while the Preferred Alternative would reroute Pine Grove Avenue to the M-25 Connector to the west of the plaza. The Township Alternative includes the widening of Pine Grove Avenue. All three Build Alternatives widen Hancock Street between the M-25 Connector and Pine Grove Avenue and would reconstruct the Water Street interchange with I-94/I-69. Each of these roads will at least be partially closed and/or require

detours during periods of construction. The new plaza under the Township Alternative is not anticipated to create disruption to the local streets surrounding it because the plaza will be secured with no access other than from the interstate highway.

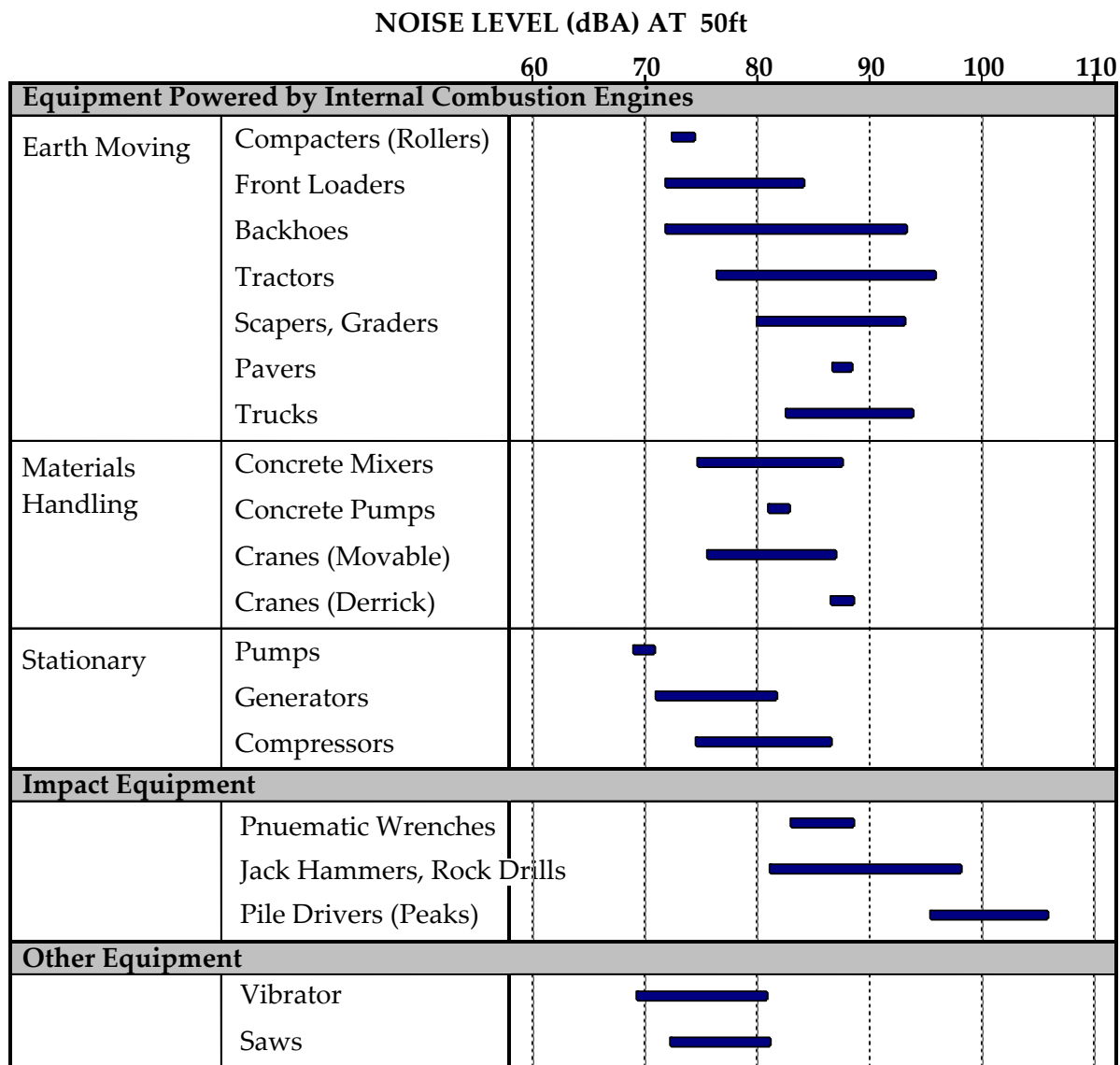


Construction equipment would generate temporary noise impacts.

Construction Noise and Vibration Impacts: The noise generated by construction operations and equipment would vary greatly, depending on the equipment type and model, mode and duration of operation, and specific type of work in progress. General construction noise impacts for those individuals living or working near the project can be expected from demolition, earth moving, and paving operations. **Figure 3.21.1** lists some typical peak operating noise levels at a distance of 50-feet. Impacts resulting from construction noise would be temporary and would affect homes and businesses close by. As construction would be phased, different homes and businesses would be affected by construction noise at different times. Construction could create vibrations that would pose a temporary disturbance to people and animals, and could affect nearby structures. Considering the relatively short-term nature of construction noise and the fact that construction will only take place from dawn to dusk, impacts are not expected to be substantial.

Much of the construction under both the City East and Preferred Alternative would be located within the boundaries of the existing plaza. While a number of nearby residential and commercial properties would be acquired, there would still be properties close to the plaza that would be impacted by noise and vibrations.

The Township Alternative would entail construction of new local roadway lanes and a new plaza on a new site. There are some residences close to the site of the potential new plaza, particularly north of the new plaza site, which would be impacted by nearby construction noise and vibration. The Township Alternative would also include new security barriers and local travel lanes in the I-94/I-69 corridor, all of which would have construction noise impacts on neighboring properties.



SOURCE: U.S. Report to the President and Congress on Noise, February, 1972.

Figure 3.21.1 Construction Equipment Sound Levels

Construction noise would be minimized by requiring that construction equipment have mufflers, that portable compressors meet federal noise-level standards, and that all portable equipment be placed away from or shielded from sensitive noise receptors, if at all possible.

Care would be taken to prevent vibration damage to adjacent structures. In areas where construction-related vibration is anticipated, basement surveys would be conducted before construction begins to document any damage caused by highway construction.



MDOT would use proper sediment and erosion control measures during construction.

Construction Water Quality and Resources Impacts: Surface water quality impacts would be expected from constructing any of the Build Alternatives. Construction-related erosion, siltation, and riverbed disturbance would be the short-term construction effects. Temporary increases in sedimentation and turbidity levels of surface waters would occur during construction depending on how close excavated areas are to rivers and how often storms occur.

Proper sediment and erosion control would minimize these impacts. Groundwater is not expected to be impacted because appropriate erosion and sediment control measures would be implemented.

Construction Air Quality Impacts: All three Build Alternatives would have a temporary air quality impact due to construction equipment pollutants, traffic emissions, and dust from areas where soil is exposed or traveled on by construction equipment.

Disruption of Utility Services: The Build Alternatives would affect utilities that are adjacent to or crossed by the project. These include: electrical, cable, street lighting, gas pipelines, sewers, watermain, and phone service. Even if utilities do not require permanent relocation or adjustment, service to the project area may be temporarily interrupted during short periods of construction. For the most part, the effects on utilities would go unnoticed.



Construction activities would have temporary visual impacts.

MDOT and its contractors will coordinate with the utilities and affected communities prior to beginning construction or implementation of new phases. The coordination will be maintained throughout the project.

Visual Impacts from Construction Activities: For residences and businesses located near construction sites, there would be temporary visual impacts associated with construction work, particularly from earthwork operations, storage of materials / equipment, and removal of buildings.

3.22 The Relationship Between Local Short-Term Uses of the Human Environment and the Maintenance and Enhancement of Long-Term Productivity

All alternatives under study (including the No-Build Alternative) would involve short-term and long-term tradeoffs. In the case of the Blue Water Bridge Plaza improvements, the money, labor, and construction materials used to construct the project will be substantial. Based on all of the improvements included in the project, the ultimate benefits should justify the initial costs. These costs and benefits are not limited to the spending of public dollars, but also include hard-to-quantify items such as improved security, improved border processing, economic development benefits, etc.

For this discussion, "short-term" refers to the immediate direct consequences of the project while "long-term" refers to its direct or indirect effects on future generations.

Short-term consequences to the environment resulting from the Build Alternatives have been discussed throughout **Chapter 3 The Environment: What's There Now and Project Effects**.

In the case of the No-Build Alternative, there will be fewer short-term uses of the human environment above and beyond existing or planned activities at the plaza. Existing land uses would remain as they are today, and the existing plaza would continue to follow the same long-term trends for processing international border crossings. Over the long term, congestion and delay at the plaza will likely increase as international traffic grows and requirements for Homeland Security measures increase in magnitude and complexity.

In the case of the Build Alternatives, short term uses of the environment would include:

- Temporary air, noise, water pollution, and visual effects caused by reconstruction of roadways

- Temporary air, noise, water pollution, and visual effects caused by reconstruction of the existing plaza into new uses. In the case of the City East and Preferred Alternative, these effects would be greater near the existing facility. In the case of the Township Alternative, the effects near the existing plaza would be less intensive, since the existing plaza “footprint” would remain to provide maintenance and duty-free services
- In the case of the Township Alternative, temporary air, noise, water pollution and visual effects caused by construction of a new facility on mostly open space
- Increased cost to motorists in time and fuel efficiency because of construction delays and detours
- Disturbances to businesses, homes, and institutions because of construction
- Conversion of open space, agricultural land, woodlands, and wetlands to transportation or Homeland Security use
- Relocation of people and businesses, including expenses that would be incurred as these people and businesses are compensated
- Reduction in property tax revenues resulting from relocation of people, businesses, and other land uses
- Use of public funds to build the highway and plaza infrastructure

Most of the long-term benefits from making the improvements to the Blue Water Bridge Plaza are addressed in **Chapter 1 Why Are Improvements Needed?** The No-Build Alternative would not provide any long term benefits, and instead, the plaza would likely deteriorate over time as the existing plaza becomes more out of date and less efficient. Under the Build Alternatives, there will be long-term benefits including:

- An improved level of security and the economic and social benefits that come with the higher security
- Improvements in both domestic and international driver convenience, safety, travel time, and energy use
- In the case of the Township Alternative, an increase in the distance between nearby affected residences and plaza activities
- Economic development opportunities from improved access and local opportunities for contractors in the region

- Reduction of air pollution and noise due to more efficient processing of vehicles on the plaza

The improvements to the Blue Water Bridge plaza, local roads, and I-94/I-69 are consistent with the long range transportation plans of Southeast Michigan Council of Governments and the Michigan Department of Transportation.

3.23 Permanent and Lasting Commitments of Resources

This section discusses the permanent and lasting commitments of resources involved in the selection and construction of an alternative to improve the United States Plaza at the Blue Water Bridge. Permanent commitments of resources occur when you convert something like wildlife habitat to a transportation project. You could try and convert it back later or replace it, but the habitat will never quite be the same. Lasting commitments of resources are the money, materials, and labor put into a project. Some of these resources, like materials, could possibly be recycled. Others would be gone forever.

No-Build Alternative: Permanent commitments of the No-Build Alternative include the money, time, and personal hardship related to increasing congestion on the plaza and local roadways and the inability of the current plaza to meet the needs of Customs and Border Protection. As the plaza deteriorates over time, there would be increasing costs for energy and the time required for business travel and personal driving. As traffic delay and operational inefficiencies increase, air pollution, noise pollution, and crashes would affect the local environment to a greater extent than exists today.

Build Alternatives: Construction of the Build Alternatives involves the commitment of a range of natural, physical, human resources and public tax dollars. Land used for construction of the proposed improvements is considered a permanent commitment during the time period that the land is used for a highway or security facility. For right-of-way, land resources would be converted from natural, agricultural, residential, and commercial areas. However, if a greater need arises for the use of the land or if the highway facilities and plaza are no longer needed, the land can conceivably be converted to another use. At present, there is no reason to believe such a conversion would ever occur.

Construction of any Build Alternative would utilize considerable amounts of fossil fuels, labor, and construction materials such as cement, stone, and asphalt materials. Such a

resource use would be generally permanent, although it would be possible to retrieve and reuse these resources to a limited extent. Any construction would also require a substantial one-time expenditure of both state and federal funds which are irretrievable.

The commitment of these resources is based on the concept that residents in the local region around the Blue Water Bridge Plaza, the State of Michigan and Province of Ontario, and the United States and Canada will benefit from these improvements.

CHAPTER 4

SECTION 4(f) AND 6(f) EVALUATION

The purpose of this section of the DEIS is to analyze the adverse impacts of the project on sites that are regulated by Section 4(f) of the Department of Transportation Act of 1966 (as amended). Section 4(f) states that no highway project should be approved which requires the use of any publicly owned land from a public park, recreation area, wildlife and waterfowl refuge or historic site unless there is no feasible or prudent alternative to the use of such land. In addition, adverse impacts to these 4(f) sites must include all possible planning to minimize harm resulting from such use. This evaluation will provide facts about each Section 4(f) protected property in the Study Area and potential effects on these sites.

What is a Section 4(f) Property?

A Section 4(f) property could be a public park, recreation area, wildlife or waterfowl area, or a historic property such as a house or building.

The Study Team determined that there would be two Section 4(f) properties affected by the project and evaluated whether there are feasible/prudent alternatives to the use of the site, and identified potential measures to minimize harm. A different piece of legislation that also covers recreational properties is Section 6(f) of the Land and Water Conservation Act of 1965. There are no 6(f) properties affected by any of the build alternatives.

The alternatives associated with the project, including the Preferred Alternative (City West) have been discussed in detail in **Section 2.0 Alternatives Considered** of the DEIS. In brief, the project will reconstruct the existing Blue Water Bridge inspection plaza and the I-94/I-69 roadways to better accommodate future security and transportation needs.

4.1 Are there any 4(f) Properties located within the Study Area?

There are four properties located within or adjacent to the Project Study Area as shown on **Figure E.21, Community Facilities** in **Appendix E**. They include:

- Port Huron Township Park No. 1
- Port Huron Township Park No. 2



Riverside Park